

forehead the rich metallic green of the old birds ; the two middle tail-feathers, however, are still webbed, but are now two or three inches longer than the rest. In the next state these two feathers have been replaced by the immensely long, bare rachides, quite equal to the greatest size they attain ; but there is yet no sign of the fine side-plumes which mark the fourth and perfect state of the species. I am inclined to believe, therefore, that this extraordinary mass of plumes is only obtained by the *Paradisea* in its fourth year, and after three complete changes of its feathers. This will account for the very large number of immature birds everywhere seen, while the full-plumaged males are comparatively scarce. It is singular that I have not been able to obtain a single adult female, my only specimen of that sex being, I think, also a young bird. It is exactly similar to the youngest males, of a coffee-brown all over ; but in Bonaparte's 'Conspectus' it is stated that the female is dusky yellow and brown, with the under parts *entirely white*. This, I cannot help thinking, must be a mistake, or altogether another bird ; for neither myself nor my hunters have ever seen one at all resembling it, out of many hundreds in various states of plumage. The natives who shoot the birds are also quite unacquainted with it, and always declared that the birds of a uniform brown colour were the females. I am sorry I could not positively determine the point, because I shall probably not again visit the districts in which the *Paradisea apoda* is found. I hope, however, to obtain the allied *P. papuana* on the north coast of New Guinea, and trust to be more successful in ascertaining the female of that species. It is also worthy of notice that the long cirrhi of the tail in the full-plumaged males vary very much in length, and the shortest is often the most worn, showing that it has reached its full development for the year. A specimen occurs occasionally with immense cirrhi ; one of mine has these feathers 34 inches long, while the general length seems to be from 24 to 28 inches. I think it probable, therefore, that these cirrhi increase in length each year, and that the very long ones mark very old birds. The other dimensions of the bird, and the length of the ornamental side-plumes, are in all cases almost exactly equal.

XLI.—*Observations on the Habits of the common Marten* (*Martes foina*). By Madame JEANNETTE POWER*.

EVERY one knows that the Marten is very wild, and that it inhabits the forests. As cunning as the Fox, it prowls like that animal round about isolated houses and farms, and enters these for the purpose of plunder ; its visits, which are not disinterested,

* Communicated by Prof. Owen.

reduce the farmer's wife to despair, for the passage of the Marten is always indicated by ravages in the pigeon-house and poultry-yard. It almost always escapes the traps which are laid for it, and all the precautions employed to protect the poultry-yard from its attacks. Nor does it find much sympathy amongst sportsmen, who regard it as a formidable rival.

It generally feeds upon small birds and quadrupeds, causing an immense destruction of young partridges, leverets, young rabbits, and other small game. It eats dry fruits, almonds, walnuts, nuts, figs and grapes.

Wishing to study the habits of these little animals, and to ascertain the extent of instinct with which they might be endowed, I succeeded in obtaining a pair, male and female, which were caught, at the age of about three or four months, in the forests of Mount Etna.

My observations soon showed me that the Marten is a very interesting animal, in respect of the perfection of its instinct; one might say that it possesses a consciousness of what it does.

To tame my Martens, I began by giving them their food with my own hands, three times a day regularly. Their food consisted of beef. At first they were rather wild; but with perseverance and care, I succeeded in overcoming their wildness; they formed a great friendship for me, and began to mount upon my knees and to lick my hands; they followed me all over the house, and at last they were almost always close to me.

When I went out, I shut them up in a little room; on my return, they came to me with a sad aspect, listened to me, and gave me to understand how weary they had been of my absence. I would take them upon my knees and caress them; my caresses brought them to a good humour, when they would leap upon the chairs and tables, or whatever was within their reach.

To make a slight trial of their natural forest instinct, I had a tree brought into my antechamber; hardly had it been placed there, when my Martens climbed to the top of it; but on seeing me return to my room, they descended from the tree in order to follow me. They slept upon the tree, and almost always with the head bent down. If I shut them up in my antechamber, they gnawed at the door, and cried with all the force of their little lungs; I was then obliged to yield and open the door for them.

When I was dressing for the evening, or undressing to go to bed, the Martens introduced themselves gently between the mattresses of my bed, with the view of keeping me company and passing the night with me, which did not suit me at all.

Shortly after I obtained my Martens, the mice which we had in the house disappeared; but I never observed that they caught

any. I even made the experiment of giving them, at one of their meals, the flesh of a large rat; they smelt at it, at the same time making faces, but did not touch it, and went away from it with an air of disgust and repugnance.

The Marten has the senses of smell and hearing very delicate. Mine always smelt at their meat before touching it, exactly in the same way as a cat. If the meat were not fresh, they did not eat it, came to me with an uneasy air, and endeavoured, by their little actions, to make me understand that they were hungry. When my servant came to fetch the basket in which he usually placed the meat which I sent him to buy for the Martens, they would spring upon the window-sill, and there watch for his return; when they saw him, they ran before him, jumping about with joy, and emitting their little cry, *hi, hi, hi*.

One day the servant, wishing to see what the Martens would do if he arrived with empty hands, left the basket upon the staircase, and came into the antechamber. They were soon convinced, by the fineness of their scent, that he had not brought any meat. A very interesting scene then took place: first of all, they showed their anger against the servant, by grimacing at him and showing their teeth; then they came to me, opening their mouths, and endeavoured to make me understand that their food had not been given to them. They mounted upon my knees, gave me a thousand caresses, played a thousand tricks, and at this critical moment displayed all the sagacity with which they were inspired by their instinct. I was then obliged to yield to their earnest entreaties, and give them the meat for which they were so anxious.

Wishing to know how the Martens contrive to attack squirrels, and the mode of defence of the latter, I procured a living squirrel, and put it upon the tree; as soon as the Martens perceived it, they threw themselves upon it, and notwithstanding its agility, it could not long escape from the cruelty of its two enemies. The battle was short; the squirrel was attacked, killed, soon torn to pieces, and devoured. The Martens only left the skin, the head and the intestines.

I remarked that although they were very fond of the flesh of young game, they always gave the preference to beef, but they never ate the fat. Another very curious and interesting observation with regard to the instinct of these animals is, that when my Martens saw ill-dressed people entering the house, even though they were in the habit of seeing them come frequently, they threatened them by showing their teeth, and their hair stood on end to the very tips of their tails. I was then called immediately, and was compelled to threaten them with a cane which I held in my hand when I was angry with them, to pre-

vent them from springing at the face of these people. This did not happen with persons of my acquaintance, whose costume differed from that of the class of people for whom they had such a dislike; they ran before these, testifying by caresses, cries of *hi, hi, hi*, and leaps, the pleasure which they experienced in seeing them again. I cannot compare these amicable demonstrations to anything better than those of a dog towards those whom he knows to be friends of the family.

They often went into the kitchen, and one day they carried off a fillet of beef; after eating a piece of it, they hid the remainder under my bed. I was informed of this robbery, and thought it necessary to watch my Martens. I soon perceived that they went frequently under my bed. I gave orders for an inspection in this direction, but they soon saw that the booty which they had deposited there was about to be taken from them, and began to show signs of discontent and irritation towards the servant. I was obliged to interfere, with all my authority, and armed with the stick, in order to prevent them from biting the person to whom I had given orders to carry off their prey, that is to say, the remainder of the fillet of beef.

I was not long in showing them the means of cleanliness, and for this purpose I frequently took them into the kitchen. If this room happened to be closed, they got the door opened by signs, and then went of their own accord into a corner, where I had from the first caused some sand to be placed and renewed daily.

It is customary in Sicily to take the air upon the balconies of the houses: when I did this, my Martens followed me, and mounted upon the balustrade of the balcony, or upon my shoulders, to look into the street. When they perceived any of my friends, they had a movement, a manner of recognizing them; but if a dog came by, they put themselves in a threatening posture; their hair stood on end, they showed their teeth with contortions of the face, and uttered a slight grunting noise. Frequently I have seen the passengers stop to look at them, and many of these kept their dogs by them in order to prolong a scene which was truly amusing in every respect. From time to time, also, they gave chase to the cats; and there was not one of these animals that ventured to approach my house.

A still more extraordinary fact is the following. The Martens often remained alone upon the balcony, when, if they happened to notice one of my friends, they came into the room, and by means of repeated and unequivocal signs, made me follow them to the balcony; but if they saw that the person turned the corner of the street, they ran to a window which opened above the gate of our court-yard, where they watched and waited for my

friend's entrance; then they ran to let me know, by their usual demonstrations, and afterwards went into the antechamber; if the servant was not there, they ran to seek him, just as an intelligent dog might have done.

If, in jumping about, they happened to break a glass or a cup, they appeared to be quite conscious of their fault; for they made their escape and hid themselves, dreading correction.

My maid having left a ball of knitting cotton upon a chair, one of the Martens took the end of the thread, and mounted upon the tree; in less than two hours it succeeded in constructing, at the top of the tree, a sort of net, most artistically interwoven, so as only to leave very small spaces between the threads. I could not imagine for what purpose this pretty piece of work was intended. At last I understood, and calling in some boys, I promised them a reward if they were clever enough to catch me some living birds; I gave them my nets, a cage, and some corn, and in eight hours they brought me eleven birds. The next morning I opened the cage underneath the net; several of the birds flew into the tree, others upon the windows and doors. The Martens, on seeing the birds, climbed up the tree, the windows, and the doors, killing those which they could catch: the chase was for some time very amusing, not for the poor birds, but for me, and two of my friends who were present. When all the birds were killed, the Martens devoured several of them, only leaving the feathers, the beak, the feet and the intestines; afterwards they hid the other birds under a piece of furniture, going from time to time to make sure that they were still there. When they were hungry, they went to take the birds and eat them.

When they saw me busy writing, they mounted upon my shoulders, and watched for a favourable moment to steal a book or some papers, which they carried off to their tree with incredible velocity, or hid under some furniture.

One day, my servant, on going into the kitchen to clean the plate, could not find it, and then perceived that many kitchen utensils and all the dusters were wanting, as well as some linen which was being washed; he came to me, pale and frightened, to tell me that I had been robbed. I went into the kitchen, where I thought it strange that the Martens had not followed me; I called them, and they came with a timid air, trembled, and kept at a distance from me, and I observed that they looked towards a cavity under a staircase. I took the cane with which I corrected them, and showed it to them, scolding them at the same time with a severe air, and making them understand that they had committed a crime. They fled into a corner, and took a supplicating posture, on seeing them in which I could not

help laughing. I told the servant, who understood nothing of this scene, to look under the staircase; to his great surprise, the objects were found, and, which is astonishing, not one of them was broken or torn. Whilst we were busy looking over the different objects recovered, the Martens took to flight, and went to hide themselves between the mattresses of my bed; they remained concealed there for more than two hours, but hunger caused them to make their appearance. They passed along the wall of the room in which I was; they had a frightened air, and did not venture near me. I pretended not to see them. After their meal, they hid themselves again; I called them; they came to me with a pitiful look; I scolded them, and showed them the cane, when they began their little cry of *hi, hi, hi*, and came in a supplicating manner to lick my hands. After this, they were well-behaved for some time.

If any one pretended to strike me, my Martens became exceedingly angry, and if I had not kept them back by menaces, they would have bitten him. One evening, being very busy writing, I had my door closed. One of my friends, Mr. Pinkerton, called upon me, and was told that I was not to be seen. In going away, he met one of his friends, who was also coming to see me. He told him that I did not wish for any visitors; but in passing along the street, a foolish idea came into their heads. Meeting one of the lamp-lighters, to take his ladder, mount to the balcony, and enter the saloon was the work of a moment. The Martens went before them with the usual ceremonies, and then came into my study to announce that I had visitors; not understanding what they wanted, I turned round and saw the two gentlemen, when I understood everything. As I was going to scold these gentlemen, I saw my Martens getting angry; I ran into the saloon, and arrived just in time to hinder the Martens from biting a gentleman who had imprudently followed the example of his friends. The Martens had never seen this gentleman, who had been absent from Messina whilst I had these animals, and certainly he did not expect such a reception. Two of my intimate friends presented themselves; the servant, knowing that I had somebody in the drawing-room, showed them in. The Martens went before them with a thousand caresses; the stranger advanced to shake hands, but the Martens would not permit him, and the scene was about to recommence. I then took the cane, and they retired into a corner of the room, but still kept their eyes fixed upon their enemy. As it was the time for their meal, I had some meat brought upon a plate, and gave it to this gentleman, at the same time placing one of the Martens upon his knee. The Marten took the meat with a grunting noise; the other Marten

jumped up close to his companion, and after their meal, peace was established.

A fortnight after this incident, I heard a noise, and ran to my balcony. There was a crowd of people in the street, and my neighbour was telling them that she had been robbed. Being too far off to hear what she said, I passed into my bed-room, the balcony of which was close to that of my neighbour, when I was struck by seeing there some things which did not belong to me. There was a bonnet, some shoes, two cups, a glass, a watch, some flowering plants which had been torn up from their pots, and other things. I begged the lady to come into my house, assuring her that I would give her some information about the robbers. One may easily understand the pleasure which this lady experienced on seeing her goods.

I told her the history of my Martens, and of the taste they had for stealing, at which she laughed much. I called my Martens, but they did not come; I looked about for them; I had the mattresses removed from my bed, but they were not there; at last I found them concealed at the top of the curtains, when they took to flight. I called them, when they came and received a good punishment. It is strange that they never touched anything either in my drawing-room or my bed-chamber.

My Martens feared, but were much attached to me; they never attempted to bite me when I punished them. One day I was weeping for the loss of a friend; they climbed upon me, caressed me, put on a sad air, and seemed to partake of the grief which I experienced.

The two Martens lived in perfect friendship; what one did, the other imitated, and they were always together in committing any mischief. Sometimes, however, although very rarely, the male corrected his companion.

Being obliged to quit Sicily to come to London, and expecting to return to Messina, I confided my Martens to the Duchess of Belviso; her husband, the Chevalier Benoit, who studied natural history, undertook the care of them. The female, which was near littering, died, either from grief at not seeing me any more, or from some other cause; and the male made his escape. This surprised me, for during the fifteen months that they stayed with me, they had every liberty, but never attempted to escape. Sometimes they crept along the wall into the street; they then went close to the gate of the courtyard, and when this was opened, returned into the house.